



# UNITED STATES PATENT AND TRADEMARK OFFICE

SW

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,028	01/23/2002	Lin Zhu	001-096A	3586

7590 01/07/2004

Jeffrey Thurnau  
The Gates Corporation  
Mail Stop 31-4-1-A3  
900 S. Broadway  
Denver, CO 80209

EXAMINER

THOMPSON, KENNETH L

ART UNIT	PAPER NUMBER
----------	--------------

3679

DATE MAILED: 01/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/057,028

Applicant(s)

ZHU ET AL. *SW*

Examiner

Kenn Thompson

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 4-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kempf, U.S. 3,052,107.

Regarding claim 1, Kempf discloses in figures 1 and 2 a shaft. Kempf discloses an outer member (1) having an inner surface describing a bore. Kempf discloses an inertial member (5) disposed within the bore and having an outer surface (5 at 4). Kempf discloses a resilient member (4) compressed between the outer member inner surface and the inertial member outer surface (col. 1, lines 50-52; col. 2, lines 8-10) for damping a shaft vibration (col. 1, lines 39-43).

As to claim 2, Kempf discloses a relief (5a) in the inertial member outer surface to mechanically engaging the resilient member.

As to claim 4, Kempf discloses the inertial member damps bending vibration (col. 1, lines 39-43).

As to claim 5, Kempf discloses the inertial member (6) having a groove (center opening of 6) extending parallel to a shaft center line.

Art Unit: 3679

As to claim 6, Kempf discloses a plurality of inertial members (5,6) engaged with a plurality of resilient members (4).

As to claim 7, Kempf discloses an inertial member (6,5) having an outer surface (5 at 4, 6 at 4). Kempf discloses a resilient member (4) engaged with the outer surface. Kempf discloses the resilient member having a resilient member outer surface (4 at 1) for engaging a shaft (1) bore.

As to claim 8, Kempf discloses a profile (6a, 5a) in the inertial member outer surface for mechanically engaging the resilient member (4).

As to claim 9, Kempf discloses the inertia member (6,5) outer surface having a groove (col. 1, lines 50-51) extending parallel to an inertia mass centerline.

As to claim 10, Kempf discloses the relief (5a) is a groove.

As to claim 11, Kempf discloses the relief comprises a geometric shape.

As to claim 12, Kempf discloses the geometric shape comprises an arcuate shape (curve of 5a).

As to claim 13, Kempf discloses the profile comprises a groove.

As to claim 14, Kempf discloses the profile comprises a geometric shape.

As to claim 15, Kempf discloses the profile comprises an arcuate shape (curve of 5a).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3679

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kempf, U.S. 3,052,107 in view of Haushalter, U.S. 3,077,090.

As to claim 3, Kempf discloses the resilient member (4) is compressed (col. 1, lines 50-52) between the inner surface and the outer surface. Kempf does not disclose the resilient member is compressed in a range of 5 to 50 percent of an uncompressed thickness. Haushalter teaches in figure 3 and 4 use of a resilient member (12) being compressed in a range of 5 to 50 percent of an uncompressed thickness (col. 2, lines 61-65) to frictionally engage the surfaces. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the resilient member disclosed by Kempf to be compressed in the range of 5 to 50 percent as taught by Haushalter to frictionally engage the surfaces to thereby better keep its place.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

Art Unit: 3679


shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenn Thompson whose telephone number is 703 306-5760. The examiner can normally be reached on 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on 703 308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-7687 for regular communications and 703 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-2168.

KT  
December 24, 2003

  
**Lynne H. Browne**  
**Supervisory Patent Examiner**  
**Group 3600**